

[54] HOT MELT ADHESIVE SYSTEM

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[57] ABSTRACT

A hot melt foam adhesive system including a gear pump wherein gas is mixed under pressure into the molten adhesive and is driven into solution with the adhesive. The adhesive/gas solution is supplied at a relatively high pressure to a valved dispenser or gun from where it is dispensed onto a substrate. As the adhesive/gas solution emerges from the dispenser, the gas comes out of solution but remains entrapped in the adhesive, thereby forming an adhesive foam. The system includes a recycle flow line or hose for returning adhesive/gas solution from the dispenser to the pump. Within this recycle flow line there is a pressure regulator responsive to flow changes or viscosity changes of the adhesive/gas solution for maintaining a fixed back pressure in the system, thereby enabling the system to maintain a fixed and uniform flow rate from the dispenser during all operating conditions of the dispenser.

20 Claims, 6 Drawing Figures

